

HLA BINDING PEPTIDES AND THEIR USES

ABSTRACT OF THE DISCLOSURE

5 The present invention provides the means and methods for selecting immunogenic peptides and the immunogenic peptide compositions capable of specifically binding glycoproteins encoded by HLA alleles and inducing T cell activation in T cells restricted by the allele. The peptides are useful to elicit an immune response against a desired antigen. The immunogenic peptide compositions of the present invention comprise
10 immunogenic peptides having an HLA binding motif, where the peptide is from a target antigen. Target antigens of the present invention include prostate specific antigen (PSA), hepatitis B core and surface antigens (HBVc, HBVs) hepatitis C antigens, Epstein-Barr virus antigens, melanoma antigens (e.g., MAGE-1), human immunodeficiency virus (HIV) antigens, human papilloma virus (HPV) antigens, Lassa virus, mycobacterium
15 tuberculosis (MT), p53, CEA, trypanosome surface antigen (TSA) and Her2/neu. An example of an immunogenic peptide of the present invention corresponds to a peptide less than about 15 amino acids in length that comprises an HLA-A2.1 binding motif, where the peptide comprises the p53 sequence SMPPPGTRV.